

HAYLAND

Planning

Resource Management

Systems



Hayland

Planning Resource Management Systems

Successful resource management on hayland is the correct application of a combination of practices that will meet the needs of the hayland ecosystem (the soil, water, air, plant, and animal resources) and the objectives of the land user.

The minimum quality criteria that must be met on hayland for each of the resource concerns is explained in Section III – A of the Field Office Technical Guide.

In planning a hayland resource management system (RMS), the vegetative management practice Forage Harvest Management is the foundation on which the RMS is built. Forage Harvest Management (observing minimum cutting heights and timing of harvest, nutrient application, and weed control) is essential to the proper management of hayland. A mechanical harvest management plan that balances quantity with quality of the harvested forage to meet the needs of the plants, animals, soil, water and air resources is essential to the formulation of an RMS on hayland. Nutrient Management is planned to manage hayland fertility. Pest Management is planned to eliminate or minimize insect, disease or weed infestations.

All other practices planned on hayland are to either: 1) facilitate the application of the management plan and are identified as DESIRABLE practices, or 2) establish, renovate, more intensively manage, or accelerate changes in the hay field and are identified as NEEDED practices. The NEEDED practices are planned when necessary to treat specific resource problems to meet the criteria for managing the soil, water, air, plant, and animal resources.

Resource Management Systems include combinations of practices that are:

1. **ESSENTIAL** – Those practices that are essential to successful pastureland management and are always planned in the RMS.
2. **DESIRABLE** – These practices facilitate or enhance the essential pastureland management practices.
3. **NEEDED** – These practices are planned when necessary to establish, renovate or more intensively manage the pastureland, or accelerate changes in the pastureland by treating specific resource problems to meet RMS criteria.

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An RMS is developed by selecting a combination of the ESSENTIAL, plus the DESIRABLE or NEEDED practices, or both, whose combined effects will meet the criteria for each resource (soil, water, air, plant, and animal) and the objectives of the land user. The following is a list of ESSENTIAL, DESIRABLE and NEEDED practices applicable to hayland.

ESSENTIAL Practices –	These practices are essential for proper hayland management and sustainability, and are always planned in the RMS.
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Forage Harvest Management
Nutrient Management

Pest Management

DESIRABLE Practices –	These practices facilitate the application of the essential practices.
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Access Road
Fence

Use Exclusion

NEEDED Practices –	These practices are planned when necessary to establish, renovate, or accelerate changes in hayland or to treat specific resource problems.
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Critical Area Planting
Diversion
Filter Strip
Grade Stabilization Structure
Land Smoothing
Pasture and Hay Planting
Prescribed Burning

Riparian Forest Buffer
Streambank and Shoreline Protection
Upland Wildlife Habitat Management
Waste Utilization
Wetland Wildlife Habitat Management
Windbreak/Shelterbelt Establishment
Windbreak/Shelterbelt Renovation



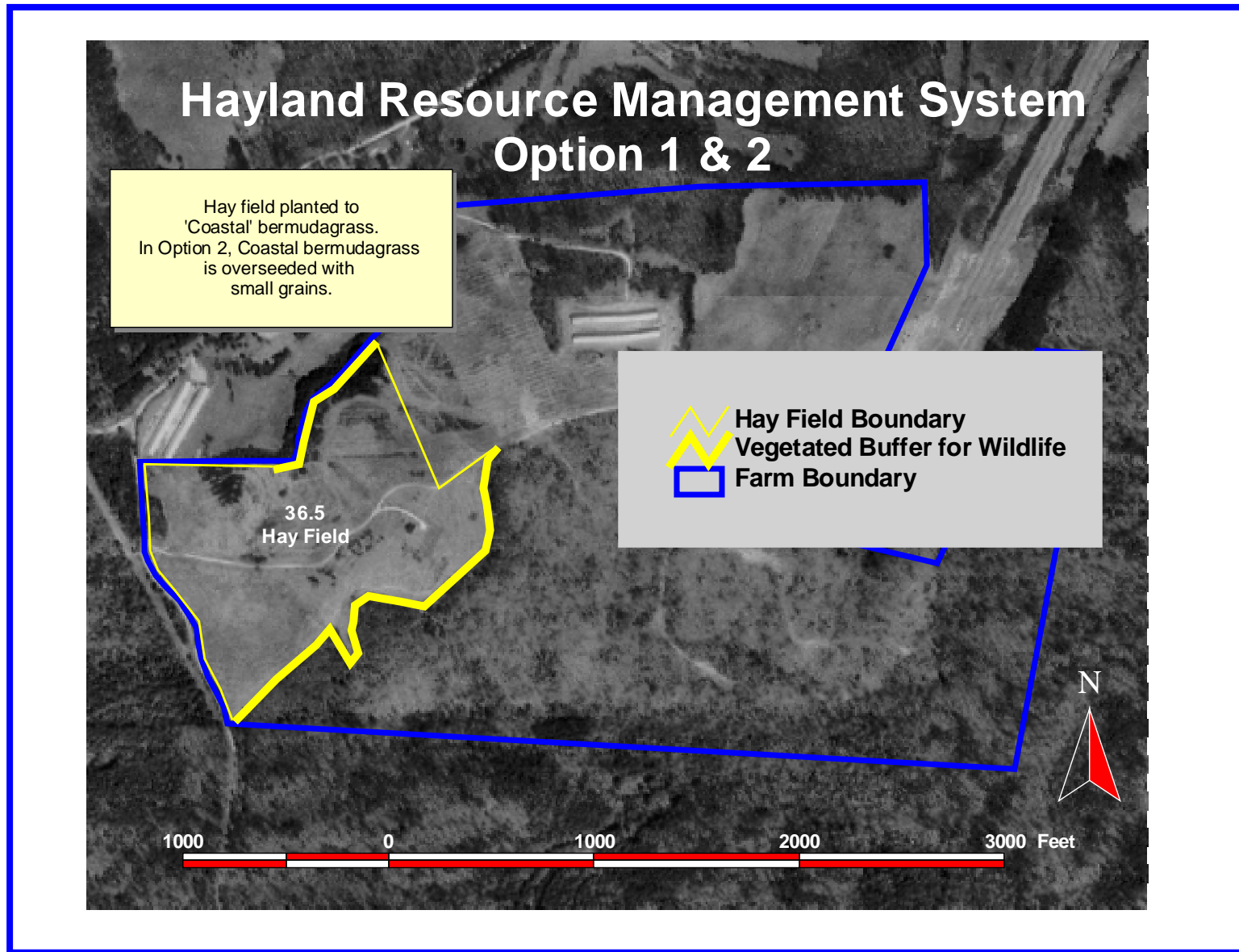
**U.S. Department of Agriculture
Natural Resources Conservation Service
Georgia**

HAYLAND RESOURCE MANAGEMENT SYSTEM (RMS)

Existing Conditions: The concerns identified are those that exist or have a high potential for occurring in the absence of needed treatment.

Coastal bermudagrass is grown for hay on a 36.5 acre field. The grass is fertilized with poultry litter. The soil is a well-drained sandy loam. There is negligible soil erosion. The air quality of the surrounding area is temporarily impaired by the odor from the animal waste. Regular, broadcast applications of poultry litter, have resulted in high levels of soil test phosphorus and the potential for surface water quality degradation. The annual hay yield is 6 tons/acre.

Suitable habitat for turkey is a concern. The wildlife Habitat Suitability Index is 0.13.



Option 1: Hayland production of coastal bermudagrass fertilized with poultry litter is planned. The cutting height of the hay harvest equipment will be set to leave the proper minimum stubble height. Hay will be harvested at an interval that ensures a balance between the quantity and the quality of the hay produced, and to meet the landowner's objectives. Whenever possible, harvested hay will be stored under cover and/or on a well-drained surface to minimize storage losses. Hay quality testing will be used prior to feeding harvested forage to livestock. The application of plant nutrients to the bermudagrass will be based on a Nutrient Management Plan. The Nutrient Management Plan will emphasize the proper timing, rate, source, and method of nutrient application for maximum yields while considering environmental concerns. Insect, weed, and disease pests will be managed. All pesticides will be applied according to Extension recommendations and product guidelines. Livestock will be excluded from the acreage used for hay production using fencing. A 20' wide mixed herbaceous–shrub border will be planted between the hay field and adjacent woods to increase food and shelter for turkey. The wildlife Habitat Suitability Index is 0.31.

Resource Problems																	
Conservation Practices	Soil						Water		Air	Plants					Animals		
	Erosion			Condition		Deposition	Quantity	Quality		Quality	Suitability	Condition	Management		Habitat Management		
	Sheet & Rill	Gully	Stream-bank	Soil Compaction	Fertilizer & Pesticides	Sediment Damage Offsite	Restricted Capacity for Sediment Deposition	Surface Water Contaminants		Airborne Odors	Plants Unsuitable for Use	Productivity	Estab Growth Harvest	Nutr. & Pest Mgmt.	Food	Cover or Shelter	Population Resource Balance
								Nutr.	Pest.						Quail	Quail	Quail
Quality Criteria Met	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
382 Fence	F	F	F	F	F	F	F	F	F	N/A	F	F	F	F	F	F	F
472 Use Exclusion	+	+	+	+	0/+	+	+	+	+	0	+	+	+	+	+	+	+
511 Forage Harvest Management	+	+	0	+	+	+	+	+	+	N/A	+	+	+	+	+	+	+
590 Nutrient Management	+	0/+	0/+	0	+	+	+	+	0	0/+	0	+	+	+	+	+	+
595 Pest Management	0/+	0/+	0	0	0/+	0	0	0	+	+	N/A	+	+	+			
645 Upland Wildlife Habitat Mgmt.	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+
F = facultative (positive impact under some conditions but not others) + = positive impact - = negative impact 0 = no impact																	

Option 2: Hayland production of coastal bermudagrass overseeded with small grains and fertilized with poultry litter is planned. Small grains will be no-till seeded into dormant bermudagrass for cool-season hay production. The cutting height of the hay harvest equipment will be set to leave the proper minimum stubble height for the species harvested. Hay will be harvested at an interval that ensures a balance between the quantity and the quality of the hay produced, and to meet the landowner's objectives. Whenever possible, harvested hay will be stored under cover and/or on a well-drained surface to minimize storage losses. Hay quality testing will be used prior to feeding harvested forage to livestock. The application of plant nutrients to the bermudagrass and small grains will be based on a Nutrient Management Plan. The Nutrient Management Plan will emphasize the proper timing, rate, source, and method of nutrient application for maximum yields while considering environmental concerns. Insect, weed, and disease pests will be managed. All pesticides will be applied according to Extension recommendations and product guidelines. Livestock will be excluded from the acreage used for hay production using fencing. A 20' wide mixed herbaceous–shrub border will be planted between the hay field and adjacent woods to increase food and shelter for turkey. The wildlife Habitat Suitability Index is 0.57.

Resource Problems																		
Conservation Practices	Soil						Water		Air	Plants				Animals				
	Erosion			Condition		Deposition	Quantity	Quality		Quality	Suitability	Condition	Management		Habitat Management			
	Sheet & Rill	Gully	Stream-bank	Soil Compaction	Fertilizer & Pesticides	Sediment Damage Offsite	Restricted Capacity for Sediment Deposition	Surface Water Contaminants		Airborne Odors	Plants Unsuitable for Use	Productivity	Estab Growth Harvest	Nutr. & Pest Mgmt.	Food	Cover or Shelter	Population Resource Balance	
								Nutr.	Pest.									
Quality Criteria Met	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
382 Fence	F	F	F	F	F	F	F	F	F	N/A	F	F	F	F	F	F	F	
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511 Forage Harvest Management	+	+	0	+	+	+	+	+	+	N/A	+	+	+	+	+	+	+	
512 Hay Planting	+	+	0	+	+	+	+	+	+	-	+	+	+	+	+	+	+	
590 Nutrient Management	+	0/+	0/+	0	+	+	+	+	0	0/+	0	+	+	+	+	+	+	
595 Pest Management	0/+	0/+	0	0	0/+	0	0	0	+	+	N/A	+	+	+				
645 Upland Wildlife Habitat Mgmt.	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	
F = facultative (positive impact under some conditions but not others) + = positive impact - = negative impact 0 = no impact																		